

A NEW SUBGENUS OF *EUSCHISTUS*
(HEMIPTERA: PENTATOMIDAE)

L. H. Rolston

Abstract.—*Mitripus*, new subgenus, is erected for seven South American species of *Euschistus* Dallas. The contained species previously recognized are: *E. acutus*, *E. anticus*, *E. convergens*, *E. latus*, *E. legionarius* and *E. tauricornis*. *Euschistus grandus*, new species, is added to this group. A key to species, and a description or diagnosis of each, are provided.

New synonymy recognized is *E. variicornis* Bergroth, 1914, as a junior synonym of *E. acutus* Dallas, 1951.

A lectotype and paralectotype are designated for *E. alaticollis* Stål, 1860, a junior synonym of *E. latus* Dallas, 1852.

Among the species of *Euschistus* are seven from South America which warrant grouping into a new subgenus. The group includes *Euschistus acutus* Dallas, *E. anticus* Stål, *E. convergens* (Herrich-Schäffer), *E. latus* Stål, *E. legionarius* Breddin, *E. tauricornis* Stål and one new species. The six species previously recognized are transferred from the nominate subgenus.

Mitripus new subgenus

One pair of small tubercles located on proctiger about midway between base and apex of proctiger or nearer base (Fig. 12). Theca lacking lobes on distal margin. Thecal processes originating within theca (Fig. 6).

Inferior ridge of pygophore wanting or represented only on each side. Lateral walls of genital cup each bearing large carina or carinae (Fig. 5). Rim of genital cup interrupted on each side of superior ridge by diagonal depression (except *E. convergens*) (Fig. 12). Penisfilum lying on medial vertical plane. Jugal surpassing tylus (except *E. convergens*), convergent, rarely contiguous (Fig. 1).

Type species.—*Euschistus acutus* Dallas, 1851.

Comments.—In species of the nominate subgenus, the tubercles on the proctiger are located subapically, the distal margin of the theca is lobed, and the thecal processes are firmly attached to the dorsal, distal thecal margin. Characteristics enumerated for *Mitripus* other than those relating to the proctiger and theca also occur uncommonly in the nominate subgenus or are not universal among the species of *Mitripus*.

When the conjunctiva of some specimens of *E. acutus* inflates, part of the conjunctiva everts from the theca and carries with it the thecal processes, which are then individually movable (Fig. 7). Clearly these processes are

attached to the conjunctiva rather than to the rigid theca. This suggests that the thecal processes, which are common among pentatomid species, had their origin as appendages of the conjunctiva. A partial invagination of the conjunctiva would place the basal part of conjunctival appendages, if these arose near the distal margin of the theca, inside the theca. This condition is found elsewhere in the genera *Ladeaschistus* and *Sibaria* (Rolston, 1973 and 1975).

The spermathecal bulb among species of this subgenus also presents an interesting trend. In five species the bulb is elongate and digitiform, in *E. latus* it is short relative to the diameter, and in *E. grandis* the bulb is spherical (Figs. 39–45). As far as is known, all species in the nominate subgenus have a spherical spermathecal bulb.

The genital plates provide relatively weak taxonomic characters, but the form of the posterior margin of the basal plates does differ among species. It contrasts strongly in each of two pairs composed of species similar in general appearance, viz. *Euschistus anticus* and *E. convergens*, and *E. grandis* and *E. latus* (Figs. 46–52). The basal plates overlap along part of the mesial margin, and either plate may overlap the other.

Key to Species of Subgenus *Mitripus*

1. Pair of small subbasal scutellar patches of dense black punctation (Fig. 8) *E. anticus* Stål
- Scutellum lacking patches of black punctures, or punctation in such patches not especially dense 2
2. Humeral angles acute (Fig. 1) *E. acutus* Dallas
- Humeral angles narrowly rounded (Fig. 35), or broadly rounded at least anteriorly (Figs. 13, 18, 25, 31) 3
3. Humeral angles broadly rounded, little elevated (Fig. 13); tylus and juga subequal in length *E. convergens* (H-S)
- Humeral angles narrowly rounded (Fig. 35), or rounded anteriorly, angulate posteriorly, swept strongly upward (Figs. 18, 25, 31); juga surpassing tylus 4
4. Humeral angles narrowly rounded, little elevated (Fig. 35) *E. tauricornis* Stål
- Humeral angles broadly rounded anteriorly, angulate posteriorly, swept strongly upward (Figs. 18, 25, 31) 5
5. Thoracic pleura without conspicuous black spot above each coxa; length of body without membranes less than 11 mm *E. legionarius* Breddin
- Black spot present above some or all coxa; length of body without membrane more than 11 mm 6
6. Posterior angle of humeri pale; pronotum behind eyes black or fuscous *E. grandis* n. sp.

- Posterior angle of humeri dark brown; pronotum iridescent bluish-green behind eyes *E. latus* Dallas

Euschistus acutus Dallas, 1851

Euschistus acutus Dallas, 1851:202.—Walker, 1867:247 (listed).—Stål, 1872:24 (keyed, records).—Lethierry & Severin, 1893:126 (listed).—Van Duzee, 1901:344 (record).—Kirkaldy, 1909:63.—Rolston, 1974:17-19, figs. 10-17 (keyed, description, distribution).

Euschistus variicornis Bergroth, 1914:429-430. NEW SYNONYMY.

Dorsum fuscous, grading to black on anterolateral pronotal margins, on humeri and at least basally on head; numerous yellowish brown subcalloused spots scattered on pronotum, scutellum and base of hemelytra; a lacuna of same color located near distal end of radial vein, and a small calloused yellow spot at posterior margin of each cicatrice near medial boundary; punctation rather dense, black, arranged in irregular transverse rows on base of pronotum. Length without membrane 7.6-9.0 mm.

Juga slightly surpassing tylus, inclined near apex from tylus to elevated outer margin; lateral margins not parallel (Fig. 1). Basal segment of antennae brownish yellow with fuscous longitudinal streak dorsolaterally, narrow incomplete apical ring, and elongated ventral spot; remaining segments fuscous excepting dorsal longitudinal streak on second, basal 2 tenths of third and fourth, and basal half of fifth yellowish.

Denticles on anterolateral pronotal margins small, acute or reduced to vertical rugae. Humeral angles strongly produced, acute to spinose, neither elevated nor turned forward. Membrane of hemelytra dark, veins simple or furcate. Connexivum narrowly exposed, black, interrupted in middle and narrowly at apex of each segment with yellow.

Venter orange yellow, punctation concolorous; thoracic pleura bearing 5 small black spots on each side. Evaporative area unicolorous. Spiracles and surrounding surface concolorous.

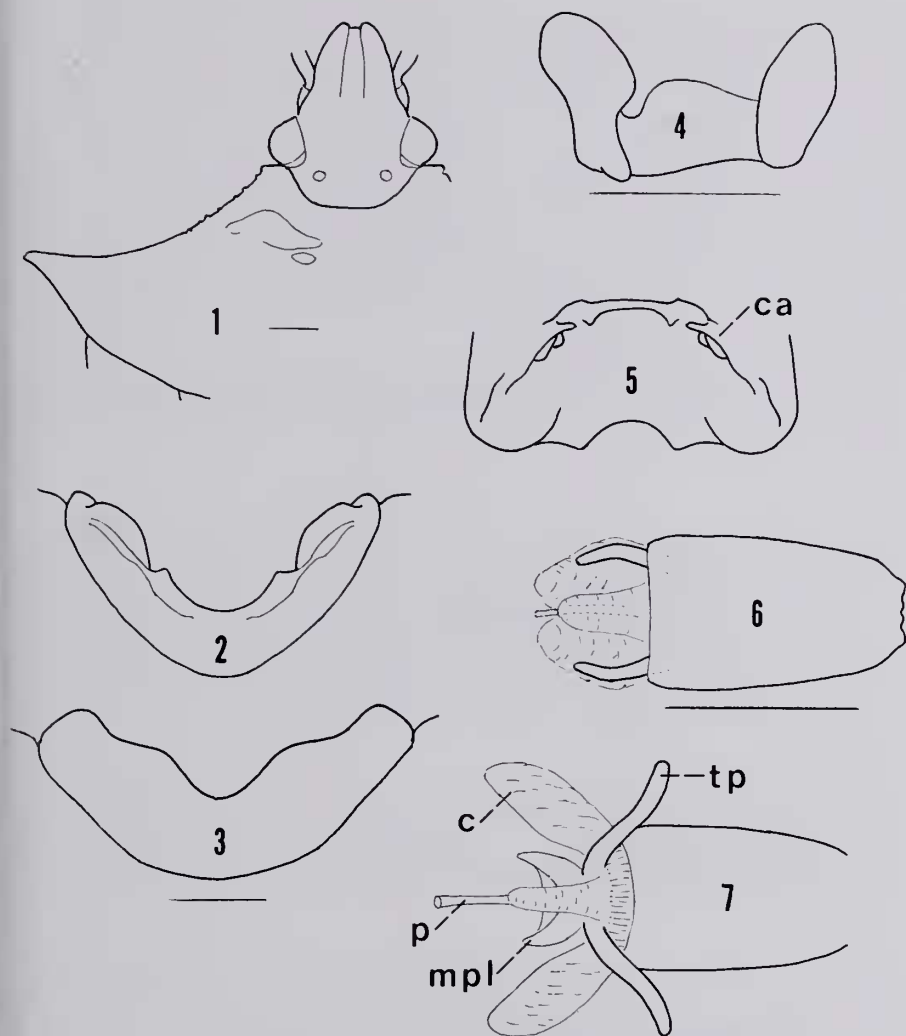
Broad emargination in posterior margin of pygophore deep and sinuous from both caudal and ventral views (Figs. 2, 3), with concave mesial notch from dorsal view (Fig. 5). Carina on each lateral wall of genital cup complex, anteriorly subvertical and bifid, posteriorly divided into two divergent rami.

Posterior margin of basal plates shallowly concave above 9th paratergite (Fig. 46). Spermathecal bulb digitiform; proximal part of spermathecal pump convolute (Fig. 39).

Distribution.—From Bolivia, Peru and northern Brazil northward in South America and Trinidad.

Type.—Female in British Museum (Natural History). Examined.

Comment.—The acute humeri are diagnostic within the subgenus.



Figs. 1-7. *E. acutus*. 1. Head and pronotum; 2. Posterior margin of pygophore, caudal aspect; 3. Pygophore, ventral aspect; 4. Right paramere; 5. Genital cup, dorsal aspect, with parameres and proctiger removed; carina (ca); 6. Theca and related structures, conjunctiva uninflated; 7. Same, conjunctiva inflated; conjunctiva (c); median penial lobes (mpl); penisfilum (p); thecal processes (tp). Dimensional lines equal 0.5 mm.

Bergroth applied the name *E. veriicornis* to specimens from French Guiana and compared them with *E. acutus*, writing: "Voisin de *E. acutus* Dall., mas plus petite et avec presque toute la face supérieure parsemée de petites taches calleuses pâles et les joues plus longues." The measure-

ments given for length without membrane of ♂ 7.8 mm and ♀ 8.3 mm, and for width at humeri of ♂ 5.8 mm and ♀ 6.8 mm, fall within the range observed in *E. acutus*. The dorsum of *E. acutus* is, indeed, sprinkled nearly all over with small, pale, calloused spots. Bergroth's detailed description also applies in other respects to *E. acutus*. The only apparently discordant statement concerns the pygophore, the apical margin of which he described as "—utrinque obliquato-subtruncato, medio sinuato, fundo sinus recto." The bottom of the emargination is concave, not straight, but if a male is inverted with the longitudinal axis of the body horizontal and the pygophore observed perpendicularly to this axis, then the bottom of the emargination does appear straight.

Although the specimens upon which Bergroth based the name *E. varicornis* were not located, I place this name in the synonymy of *E. acutus* on the basis of the description of these specimens.

Euschistus anticus Stål, 1860

Euschistus anticus Stål, 1860:20.—Walker, 1867:248 (listed).—Stål, 1872:24 (keyed, descriptive note).—Berg, 1878:306 (synonymy, variation, record).—Berg, 1879:45 (reprint 1878 paper).—Distant, 1887:61 (listed).—Berg, 1891:277 (descriptive note).—Bergroth, 1892:262 (synonymy).—Lethierry & Severin, 1893:126 (synonymy).—Kirkaldy, 1909:63 (synonymy).—Buckup, 1961:10 (record).—Grazia-Vieira & Casini, 1973:58 (record).

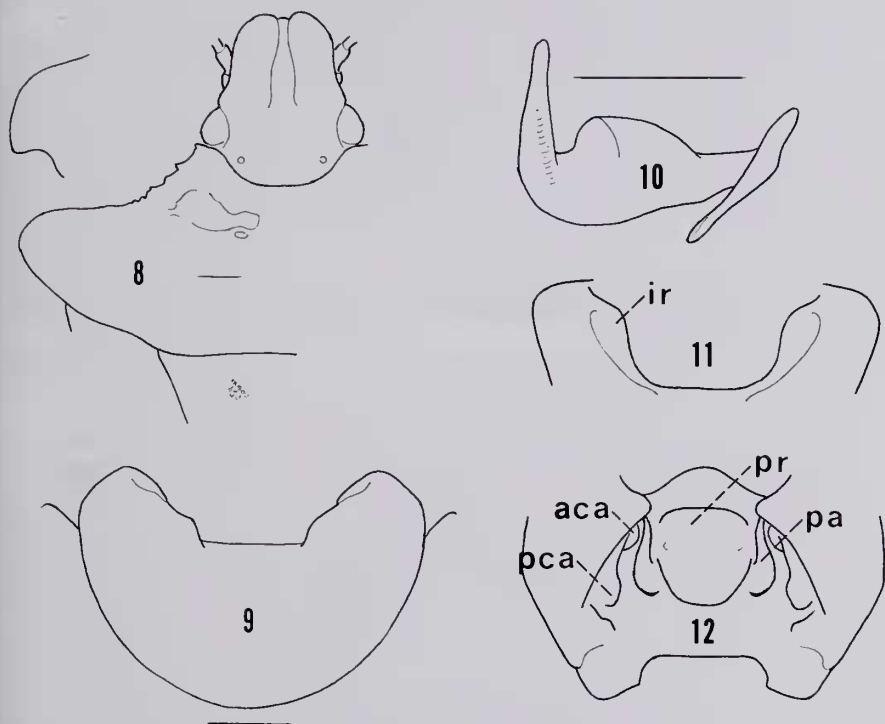
Euschistus inermis Mayr, 1864:910.—Mayr, 1868:62, fig. 11.—Walker, 1867:248 (listed).—Stål, 1872:24 (keyed, synonymy) (synonymized by Berg, 1878).

Euschistus fallax Mayr, 1864:910.—Mayr, 1868:63, fig. 12.—Walker 1867:248 (listed).—Stål, 1872:24 (keyed, synonymy) (synonymized by Berg, 1878).

Euschistus planicornis Fallou, 1889:36 (synonymized by Bergroth, 1892).

Head and anterior portion of pronotum fuscous to black with faint bronze tinge, remainder of dorsum yellowish brown, eastaneously punctate, with vague dark reticulation on hemelytra; a small patch of dense usually black punctures on each side of scutellum near base about midway between lateral margin and meson; calloused spot at posterior border of each cicatrice near mesial limit usually pale; a small pale mesial spot usually present at base of scutellum. Length without membrane 8.4–10.1 mm (7–10.5 mm according to Berg, 1891).

Head rather flat, shallowly impressed anteromesad of eyes and submarginally at apex. Juga surpassing tylus, convergent or just contiguous at apex, their lateral margins subparallel for middle third of distance from



Figs. 8–12. *E. anticus*. 8. Head and pronotum, with variation in humeri; 9. Pygophore, ventral aspect; 10. Right paramere; 11. Posterior margin of pygophore, caudal aspect; inferior ridge (ir); 12. Genital cup, dorsal aspect; anterior carina (aca); posterior carina (pca); paramere (pa); proctiger (pr). Dimensional lines equal 0.5 mm.

eyes to apex (Fig. 8). Antennae light to dark brown with a few obscure darker dots on basal three segments.

Denticles on anterolateral margins of pronotum acute, black, inclined toward humeri. Humeri moderately produced, rounded; posterolateral margin sometimes emarginated; dorsal surface following contour of pronotal disk from cephalic view, or moderately elevated. Pale portion of pronotal disk less densely punctate than dark anterior portion, with many punctures arranged in transverse rows separated by rugose interstices. Membranes of hemelytra lightly fumose; veins simple or furcate. Connexivum rather narrowly exposed, castaneous to black, weakly to strongly alternated with paler spot in middle of each segment.

Venter orange yellow, concolorously punctate; thoracic pleura with four small black spots on each side, lacking spot at anterolateral angle of pro-

thorax, occasionally with spot only at base of each subcoxae. Evaporative area unicolorous. Peritremes of spiracles fuscous.

Emargination of pygophore deep, concave, exposing inferior ridge from caudal view (Fig. 11), mesially truncate from ventral and dorsal views (Figs. 9, 12). Inferior ridge obsolete mesially. Margins of genital cup interrupted by diagonal sulcus on each side of superior ridge. Large lobed carina located on each lateral wall of genital cup; a smaller carina ventrad of first partially obscured by apex of parameres (Fig. 12). Parameres terminating in simple hook (Fig. 10).

Posterior margin of basal plates markedly concave above 9th paratergite (Fig. 47). Spermathecal bulb digitiform; basal part of spermathecal pump slightly sinuous (Fig. 40).

Distribution.—Argentina (Misiones), southern Brazil (Minas Gerais, Rio Grande do Sul, Santa Catarina) and Uruguay (Rivera).

Type.—Male, in Naturhistoriska Riksmuseet, Stockholm. Not seen.

Comments.—The small paired areas of dense, usually black punctation near the base of the scutellum is diagnostic.

I have accepted the synonymy given by Berg (1878) and Bergroth (1892). The figure published by Mayr (1868) of *E. inermis* (Fig. 11) is hard to reconcile with the one for *E. fallax* (Fig. 12) or specimens of *E. anticus*. It differs especially in the conspicuously sigmoid junction of the corium and membrane, and in the absence of subbasal scutellar spots. The distal margin of the corium actually varies in *E. anticus* from slightly convex to slightly sigmoid, and the illustrator may have exaggerated the difference between two specimens. With regard to the two subbasal spots, these are present in the 37 specimens which I have examined, but they do not always contrast strongly in color. Stål (1860) noted that these spots are sometimes obsolete. Presumably they were inconspicuous in the specimen to which Mayr applied the name *E. inermis* since the dark reticulation on the coria is also absent.

Euschistus convergens (Herrich-Schäffer, 1842)

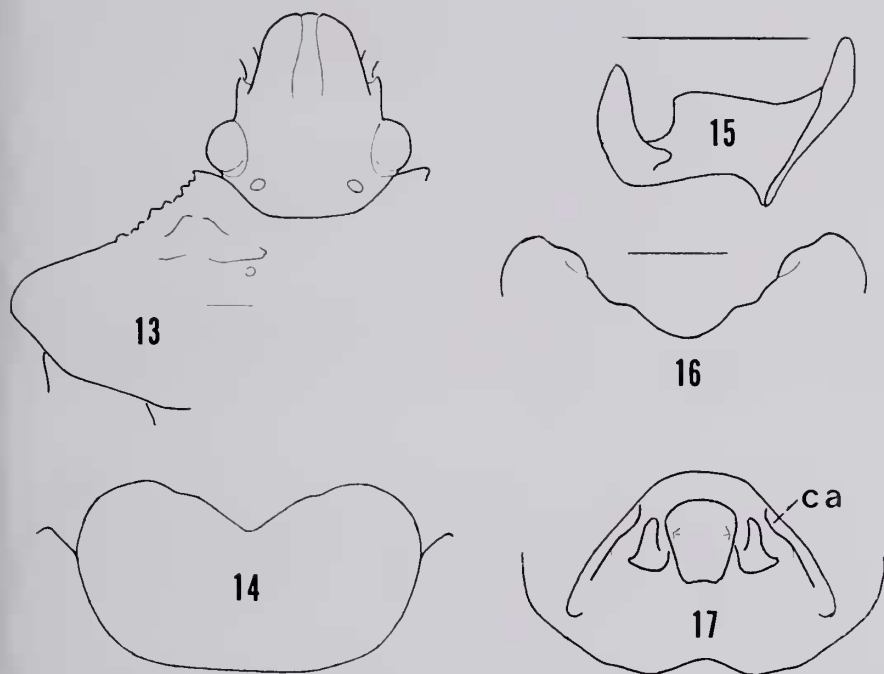
Cimex convergens Herrich-Schäffer, 1842:94, fig. 665.

Pentatoma convergens: Herrich-Schäffer, 1844:95.

Euschistus convergens: Dallas, 1851:203 (synonymy).—Walker, 1867:247 (synonymy).—Stål, 1872:24 (keyed, synonymy, descriptive note).—Lethierry & Severin, 1893:127 (synonymy).—Kirkaldy, 1909:64 (synonymy).

Euschistus roripes Stål, 1860:20.—Walker, 1867:248 (listed) (synonymized by Stål, 1872).

Dorsum fuscous with head and anterior portion of pronotum black, or entirely black, relieved by small pale spot at posterior margin of each



Figs. 13-17. *E. convergens*. 13. Head and pronotum; 14. Pygophore, ventral aspect; 15. Right paramere; 16. Posterior margin of pygophore, caudal aspect; 17. Genital cup, dorsal aspect; carina (ca). Dimensional lines equal 0.5 mm.

cicatrice near mesial limit, another on disk of each corium, and often by one to five poorly delineated spots along base of scutellum; punctation dense, black. Length without membrane 8.5-10.4 mm.

Juga slightly converging over apex of tylus, their lateral margins tapering from eyes to evenly rounded apex of head (Fig. 13). Antennae black or fuscus with sordid yellow on little more than basal half of last segment, basal fourth of fourth, basal 2 tenths of third, and as streaks above and below on three basal segments.

Humeri moderately produced, broadly rounded, elevated little if any above pronotal disk. Anterolateral margins of pronotum concave; denticles few, obtuse, yellowish. Scutellar disk uneven. Membrane of hemelytra brown, veins simple or furcate. Connexivum black, alternated with brownish orange marginal spot in middle of each segment.

Venter orange yellow, concolorously punctate; five small black spots on each side of thoracic pleura. Evaporative areas unicolorous. Peritremes of spiracles fuscous.

Posterior margin of pygophore with sinuous V-shaped emargination

from both caudal and ventral views (Figs. 14, 16), convexly arcuate with mesial notch from dorsal view (Fig. 17). Inferior ridge reduced to subvertical ridge on each side. Small denticle on each lateral wall of genital cup located just entad of and obscured by diagonal carina (Fig. 17). Parameres unequally bifid (Fig. 15).

Posterior margin of each basal plate evenly convex (Fig. 48). Spermathecal bulb digitiform: proximal part of spermathecal pump convolute (Fig. 41).

Distribution.—Argentina (Misiones), Bolivia, Brazil (Minas Gerais, Rio de Janeiro, Santa Catarina), and Paraguay.

Type.—Type material of *Cimex convergens* was not located. The type of *Euschistus roripes* Stål, a male, in the Naturhistoriska Riksmuseet, Stockholm, was compared by Per Inge Persson with specimens of *Euschistus convergens* furnished to him and found to be conspecific with these specimens.

Euschistus grandis n. sp.

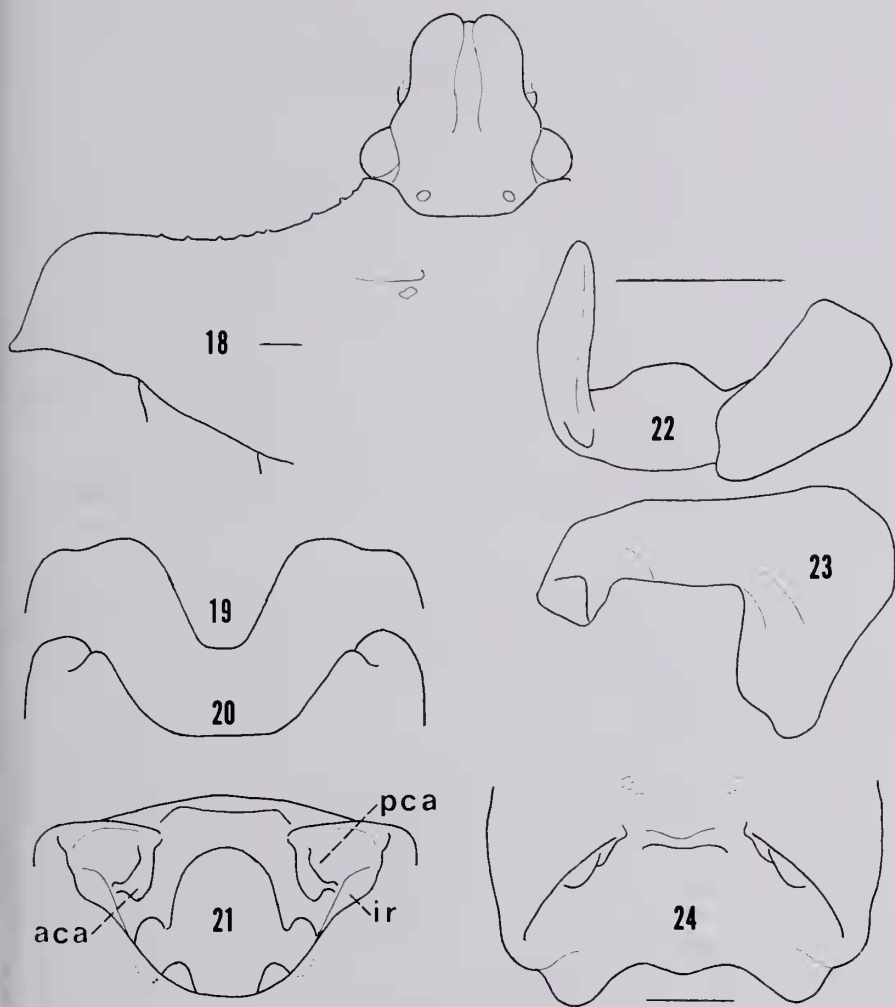
Dorsum yellowish brown to dark castaneous, becoming fuscous to black on anterior portion of pronotum and on head; small pale spot at posterior margin of each cicatrice near mesial limit, another mesially at base of scutellum; punctation dense, black, fine to moderate. Length of body without membrane 12.1–14.0 mm.

Juga longer than tylus, lateral margins briefly subparallel in concavity before eyes, inner margins toward apex converging slightly over tylus; incision at apex of head shallow (Fig. 18). Antennae ivory to sordid yellow marked with black as follows: lateral stripe and narrow apical ring on basal segment, lateral and mesial stripe widening and fusing toward apex on second and third segments, all of fourth except narrow irregular basal ring, and apical half of last segment.

Humeri strongly produced laterally, rising well above pronotal disk; truncate apex rounded anteriorly, angular posteriorly, slightly concave beneath from lateral view; posterior angle paler than rest of humeri. Anterolateral margins slightly concave, nearly right angular to axis of body; denticles small, acute, black.

Fovea in basal angles of scutellum small, obscure; scutellar disk often roughly uneven, uniformly punctate, often with scattered smooth spots, these pale or not. Corium of hemelytra with impunctate lacuna of variable size near end of radial vein; membrane brown, veins branching. Connexiva black, with short narrow pale marginal line in middle of each segment; punctation dense, black.

Venter yellowish brown; punctation mostly concolorous, sometimes castaneous, less dense but coarser than on dorsum. Basic pattern of 5 black spots on each side of thoracic pleura reduced: spot at antrolateral angle of propleura wanting, spot at base of metathoracic subcoxae



Figs. 18–24. *E. grandis*. 18. Head and pronotum; 19–20. Variation in emargination of posterior pygophoral margin, ventral aspect; 21. Genital cup, caudal aspect, with parameres and proctiger removed; inferior ridge (ir); posterior carina (pca); anterior carina (aca); 22. Right paramere; 23. Same, rotated 90 degrees toward observer; 24. Genital cup, dorsal aspect, with parameres and proctiger removed. Dimensional lines equal 0.5 mm.

often absent. Evaporative areas usually unicolorous, rarely minutely fuscous punctate. Most black dots on femora and tibiae moderately large. Spiracles black. Pygophore finely fuscous punctate.

Deep broad emargination in posterior margin of pygophore evenly arcuate

at bottom of concavity from caudal view, sinuous on each side near dorsal margin, there exposing remnant of inferior ridge (Fig. 21); from ventral view posterior margin usually broadly emarginated, prominently sinuous on each side of emargination (Fig. 20), but emargination sometimes narrowed to about one-third width of pygophore and remainder of margin weakly sinuous (Fig. 19); emargination much shallower from dorsal view (Fig. 24). Rim of genital cup interrupted on each side of superior ridge by diagonal sulcus; lateral wall of genital cup each bearing two large subparallel carinae rising diagonally cephalad from depth of cup to rim. Proctiger distad of tubercles rather uniformly setose. Base of parameres extremely large; apical hook subtriangular in cross section, almost imperceptibly roughened on lateral surface (Figs. 22, 23).

Posterior margin of each basal plate evenly convex (Fig. 51). Spermathecal bulb spherical; spermathecal pump cylindrical (Fig. 42).

Distribution.—Brazilian states of Rio de Janeiro, Santa Catarina and São Paulo. Presumably present in Minas Gerais since Mount Itatiaia, from whence some specimens came, is at the junction of Rio de Janeiro, São Paulo and Minas Gerais.

Types.—Holotype, male, labeled (a) Brazil, São Paulo, Serra Bocaina, S. J. Barreiro, 1,650 m (b) Oct-Nov 1969, Alvarenga & Seabra. Deposited in the American Museum of Natural History. Paratypes: 10♂♂, 11♀♀. *Brazil, Rio de Janeiro*: Itatiaia, 800 m, 12-933, S. Lopes et R. Cunha (2♀♀ RNH, ♀ LHR); Itatiaia, IV 1932, D. Mendes (♀ RNH); Itatiaia, 816 m, 2-1-933, N. B. Pagondes (♀ RNH); Itatiaia (sic), 1,000 m Est. Biologica, 22-12-33, W. Zikan (♂ RNH); same data except 19-1-34 (♀ USNM); same data except 25-x1-942 (♂ LHR); Faz. Penedo, Itatiaia, III-942, P. Wygodzinski (♀ RNH); Parque Nacional de Serra dos Orgaos, Terresopolis (sic), 1,500-1,700 m, 18-22, 4, 1947, Wygod. col. (♂ RNH, ♂ LHR, ♀ UNLP) *Santa Catarina*: (a) Rio Vermelho, XII 1944 (b) A. Maller (♂♀ AMNH); same data except I 1944 (♂ AMNH). *São Paulo*: same data as holotype (♂ BMNH, ♀ AMNH).

Euschistus latus (Dallas, 1852)

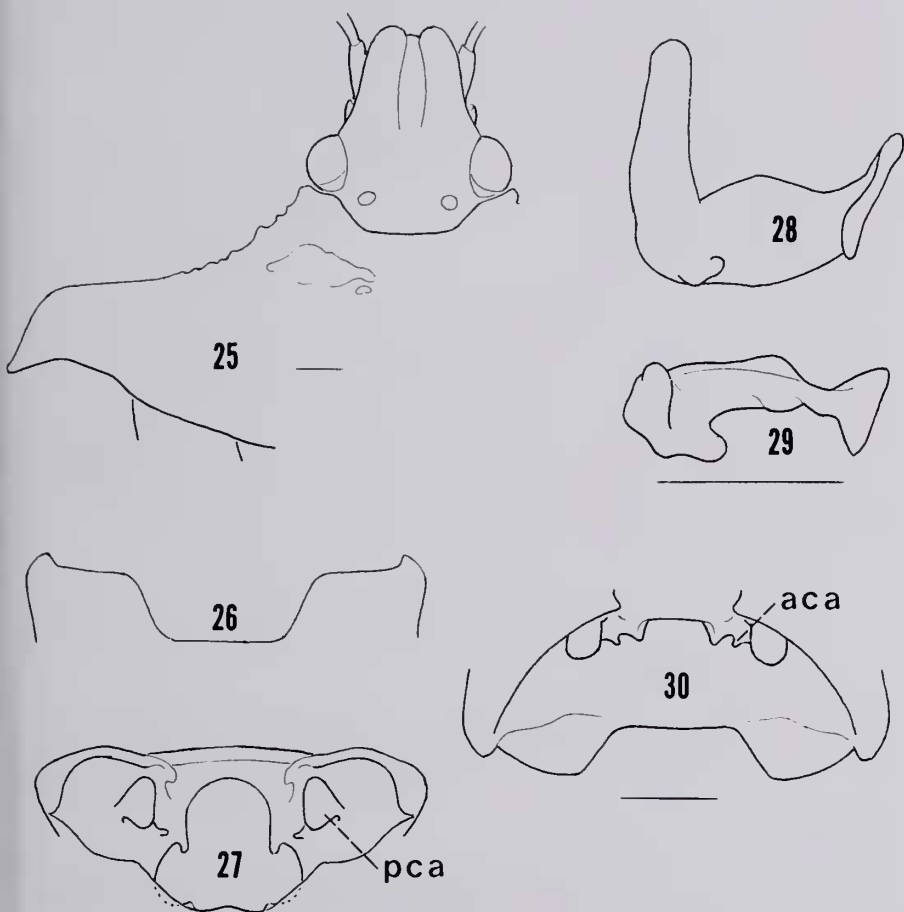
Tropicoris latus Dallas, 1852:12, fig. 5.

Euschistus alaticollis Stål, 1860:20.—Walker, 1867:248 (listed) (synonymized by Stål, 1872).

Euschistus latus: Stål, 1872:24 (keyed, synonymy, descriptive note).—Distant, 1887:61 (listed).—Lethierry & Severin, 1893:128 (synonymy).—Kirkaldy, 1909:65 (synonymy).—Costa Lima, 1940:58, fig. 252.

Differing principally from *E. grandus* as follows:

Metallic bluish-green border along anterolateral margins of pronotum



Figs. 25–30. *E. latus*. 25. Head and pronotum; 26. Posterior margin of pygophore, ventral aspect; 27. Genital cup, caudal aspect, with parameres and proctiger removed; posterior carina (pca); 28. Right paramere; 29. Same, rotated 90 degrees toward observer; 30. Genital cup, dorsal aspect, with parameres and proctiger removed; anterior carina (aca). Dimensional lines equal 0.5 mm.

broadest at eyes, evenescent before reaching humeri; exocoria usually colored similarly at base.

Lateral margins of juga tapering sinuously from eyes to apex, nowhere subparallel (Fig. 25).

Humeri clearly concave beneath from lateral view; posterior angle not differentially colored.

Posterior margin of pygophore sinuously concave from caudal view

(Fig. 27), with a small projection laterally and trapezoidal mesial emargination which narrows anteriorly from ventral view (Fig. 26); emargination from dorsal view truncate at bottom (Fig. 30). Anterior carina on each lateral wall of genital cup reduced to spur (Fig. 30). Prominent projection present where paramere sharply bent (Figs. 28, 29).

Posterior margin of each basal plate angulate, concave above 9th paratergite (Fig. 49). Spermathecal bulb somewhat elongate; spermathecal pump cylindrical (Fig. 43).

Distribution.—Brazil (Rio Grande do Sul, Rio de Janeiro); Uruguay (Montevideo).

Types.—The type of *Tropicoris latus* Dallas, a female, in the British Museum (Natural History) was examined. The syntypes of *Euschistus alaticollis* Stål, in the Naturhistoriska Riksmuseet, Stockholm, consist of a male and female. The male, labeled "Rio Jan" "Stal," is designated LECTOTYPE and the female, labeled "Brasil" "F. Sahlb." "♀" PARALECTOTYPE.

Per Inge Persson kindly compared the syntypes of *Euschistus alaticollis* with an example of *E. grandis* and *E. latus* and concluded that "it is quite evident—that *E. alaticollis* is conspecific with *E. latus* Dallas."

Euschistus legionarius Breddin, 1914

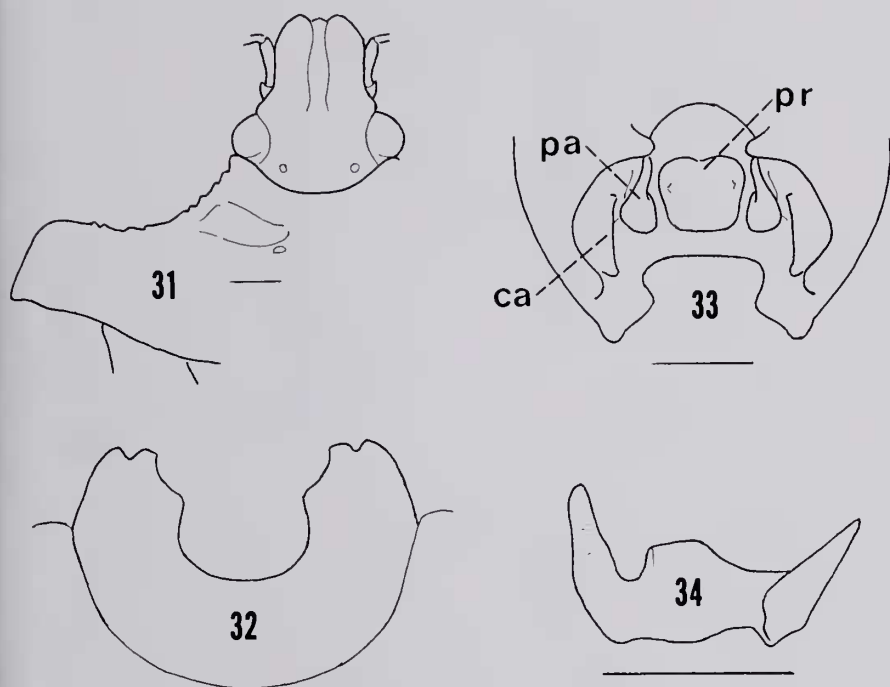
Euschistus legionarius Breddin, 1914:56—Schröder, 1964:62, 74, Pl. 1, fig. 4 (lectotype designated).

Dorsum yellowish brown grading to dark brown or fuscous on anterior half of pronotum and head; punctation castaneous to black, denser where color is darkest. Length without membrane 7.2–9.2 mm (9¼–10 mm long according to Breddin, 1914).

Juga exceeding tylus, usually angular at apex, with lateral margins parallel for middle third of distance from eyes to apex (Fig. 31). Basal 2 tenths of fourth antennal segment and basal 3–5 tenths of fifth pale, remainder of these segments fuscous.

Anterolateral margins of pronotum concave, irregularly denticulate to humeri. Humeri explanately produced, rounded anteriorly, angulate posteriorly, sweeping upward. Cicatrices prominent, tumescent, with numerous strong punctures connecting with other pronotal punctures only near posterolateral boundary of cicatrices. Small elevated callous located near posteromesial margin of cicatrices usually pale. Basal disk of scutellum roughly elevated, bearing irregular patches of black punctures along base adjacent to small fovea in basal angles; apex not pale. Dark macule often present near end of radial vein; membrane slightly brown with few simple or branched veins and an occasional cell basally. Connexivum moderately exposed, with broad black border along sutures between segments.

Venter little paler than dorsum, punctation mostly fuscous or castaneous;



Figs. 31–34. *E. legionarius*. 31. Head and pronotum; 32. Pygophore, ventral aspect; 33. Genital cup, dorsal aspect; carina (ca); paramere (pa); proctiger (pr); 34. Right paramere. Dimensional lines equal 0.5 mm.

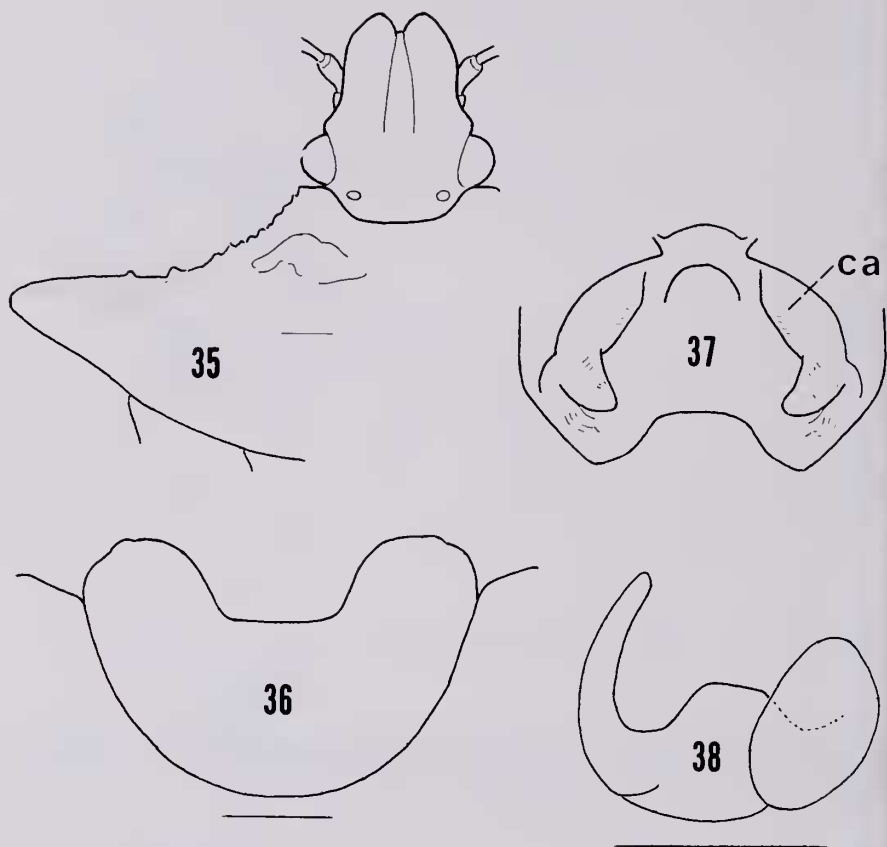
thoracic pleura lacking dark spots. Evaporative areas with fine dark punctation. Spiracles ringed with fuscous.

Posterior margin of pygophore deeply emarginate mesially; emargination truncate basally from dorsal and ventral views (Fig. 32, 33); a submarginal tumescence on pygophoral surface located below emargination. Inferior ridge lacking. Rim of genital cup broken on each side of superior ridge by diagonal sulcus. Carina on each lateral wall of genital cup tumescent, finely striate, produced posteriorly into tubercle. Parameres a simple hook (Fig. 34).

Posterior margin of each basal plate angulate, prominently concave above 2nd gonocoxae, diagonally linear above 9th paratergite (Fig. 50). Spermathecal bulb digitiform, twisted; spermathecal pump subcylindrical (Fig. 44).

Distribution.—Brazil (Minas Gerais, Santa Catarina, Rio de Janeiro).

Type.—Lectotype, male, in Natur-Museum Senckenberg, Frankfurt am Main. (Schröder, 1964). Not seen.



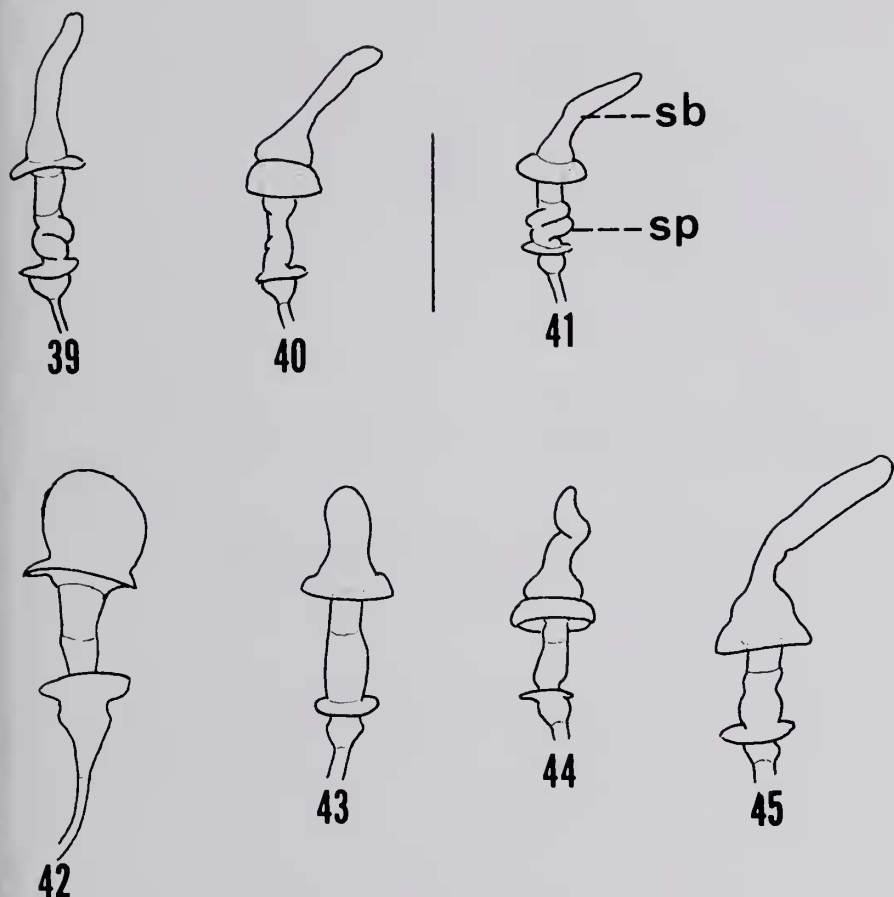
Figs. 35-38. *E. tauricornis*. 35. Head and pronotum; 36. Pygophore, ventral aspect; 37. Genital cup, dorsal aspect, with parameres and proctiger removed; carina (ca); 38. Right paramere. Dimensional lines equal 0.5 mm.

Euschistus tauricornis Stål, 1872

Euschistus tauricornis Stål, 1872:25 (keyed).—Berg, 1878:306 (listed).—Berg, 1879:45 (listed).—Lethierry and Severin, 1893:128 (listed).—Kirkaldy, 1909:66 (listed).—Pennington, 1922:317 (listed).

Dorsum yellowish brown with anterior portion of humeri black, densely punctate; these humeral areas connected by band of less dense black punctures. Length without membranes 8.0-9.5 mm.

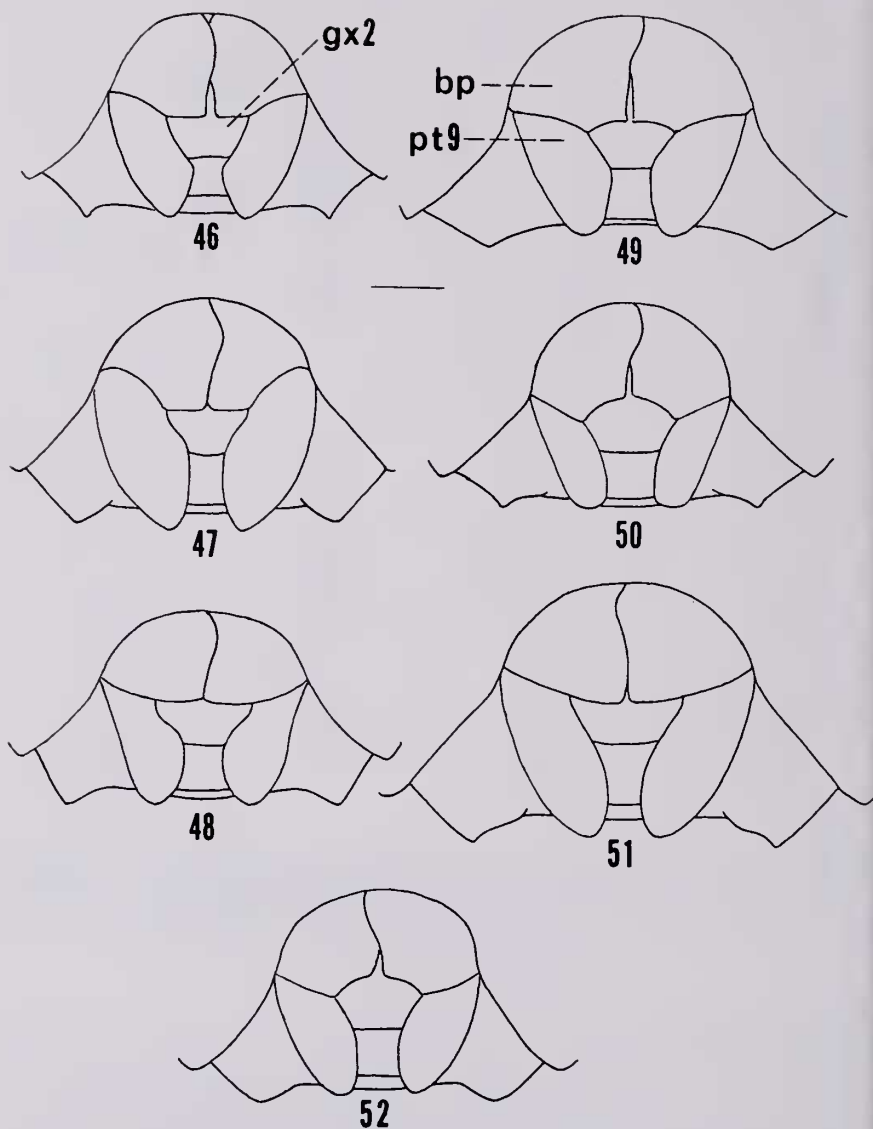
Juga much exceeding tylus, convergent, each jugum rounded apically, their lateral margins parallel for middle third of distance from eyes to apex (Fig. 35). Second and third antennal segments streaked laterally



Figs. 39–45. Distal portion of spermatheca; spermathecal bulb (sb); spermathecal pump (sp); 39. *E. acutus*; 40. *E. anticus*; 41. *E. convergens*; 42. *E. grandus*; 43. *E. latus*; 44. *E. legionarius*; 45. *E. tauricornis*. Dimensional line equals 0.5 mm.

and mesially with fuscous; last two segments castaneous, basal 1–2 tenths pale.

Anterolateral margins of pronotum concave, irregularly denticulate to humeri. Humeri strongly produced laterally, narrowly rounded at apex, little elevated. Black punctures in irregular patches at base of scutellum not especially crowded; scutellar apex ivory, concolorously punctate. A dull fuscous macule located at end of radial vein; some punctures on coria connected by network of thin fuscous lines; membrane slightly brown, veins simple. Connexivum moderately exposed, sutures between segments broadly bordered with lustrous black.



Figs. 46-52. Genital plates, oriented with anterior and posterior margins of basal plates on same focal plane at meson; basal plates (bp); 2nd gonocoxae (gx 2); 9th paratergite (pt 9). 46. *E. acutus*; 47. *E. anticus*; 48. *E. convergens*; 49. *E. latus*; 50. *E. legionarius*; 51. *E. grandus*; 52. *E. tauricornis*. Dimensional line equals 0.5 mm.

Venter yellowish brown, punctation concolorous to light castaneous. Evaporative areas unicolorous. Thoracic pleura with 4 black spots, lacking spot at anterolateral angle of pronotum. Spiracles black.

Posterior margin of pygophore deeply and broadly emarginated mesially (Figs. 36, 37); an impression as large as emarginated area located on pygophoral surface below emargination. Inferior ridge lacking. Carina on each lateral wall of genital cup tumescent, with fine undulating striae, produced posteriorly into tubercle directed dorsomesad (Fig. 37). Rim of genital cup tripartite, divided by diagonal sulcus on each side of superior ridge. Unpigmented area on basal half of proctiger with pair of tubercles intruding from pigmented distal part of proctiger. Parameres bent into simple hook (Fig. 38).

Posterior margin of each basal plate angulate, decidedly concave above 2nd gonococae, slightly convex above 9th paratergites (Fig. 52). Spermathecal bulb digitiform; proximal part of spermathecal pump an irregular cylinder (Fig. 45).

Distribution.—Uruguay and Argentina (Buenos Aires).

Type.—Female, in Naturhistoriska Riksmuseet, Stockholm. Not seen.

Comment.—An apparently rare species. The humeral marking is diagnostic within the subgenus.

Deposition of paratypes is indicated as follows: American Museum of Natural History (AMNH); British Museum (Natural History) (BMNH); author's collection (LHR); Rijksmuseum van Natuurlijke Historie (RNH); Universidad Nacional de La Plata, Facultad de Ciencias Naturales y Museo (UNLP); U.S. National Museum (USNM).

Literature Cited

- Berg, C. 1878. Hemiptera Argentina enumeravit speciesque novas descripsit. *Anal. Soc. Cient. Arg.* 5:297–314.
- . 1879. Hemiptera Argentina enumeravit speciesque novas descripsit. *Bonariae; Hamburgo.* viii + 9 + 316 pp.
- . 1891. Nova Hemiptera faunarum Argentinae et Uruguayensis. *Anal. Soc. Cient. Arg.* 32:277–287.
- Bergroth, E. 1892. Notes synonymique. *Rev. Ent.* 11:262–264.
- . 1914. Pentatomides nouveaux de la Guyane française. *Ann. Soc. Ent. France* 83:423–441.
- Breddin, G. 1914. Neue oder wenig gekannte neotropische Hemiptera. *Abh. Senckenb. Ges.* 36:53–59.
- Buckup, L. 1961. Os pentatomidos do estado do Rio Grande do Sul (Brasil) (Hemiptera-Heteroptera-Pentatomidae). *Iheringa (Zool.)* 16:5–23.
- Costa Lima, A. M. da. 1940. Insectos do Brasil. Vol. 2. Hemipteros. Escola Nacional de Agronomia. 351 pp.
- Dallas, W. S. 1851. List of the specimens of hemipterous insects in the collection of the British Museum. London. 592 pp.

- . 1852. Descriptions of some new species of hemipterous insects belonging to the tribe Scutata. Trans. R. Ent. Soc. London (n.s.) 2:6-17, plate 1.
- Distant, W. L. 1887. Enumeration of the Van Volxem collection of Rhynchota contained in the Brussels Museum. Part 1. Comptes-Rendus Soc. Ent. Belg. ser. 3 no. 31:56-66.
- Fallou, J. 1889. Hémiptères nouveaux recueilles à Minas Geraes. Le Nat. (2)1:36.
- Herrich-Schäffer, C. A. W. 1842. Die Wanzenartigen Insecten (Wanz. Ins.) 6:1-118.
- . 1844. Wanz. Ins. 7:1-134.
- Grazia-Vieira, J., and C. E. Casini. 1973. Lista preliminar dos hemipteros uruguaios de região nordeste: Pentatomidae e Coreidae (Insecta; Heteroptera). Iheringia (Zool.) 44:55-63.
- Kirkaldy, G. W. 1909. Catalogue of the Hemiptera (Heteroptera). Vol. 1. Cimicidae. Berlin. xl + 392 pp.
- Lethierry, L., and G. Severin. 1893. Catalogue général des Hémiptères. Vol. 1. Hétéroptères, Pentatomidae. Brussels; Berlin. ix + 286 pp.
- Mayr, G. L. 1864. Diagnosen neuer Hemipteren. Verh. zool.-bot. Ges. Wien. 14: 903-914.
- . 1868. Reise der österreichischen Fregatte Novara um die Erde in den Jahren 1857, 1858, 1859. Zool. Theil. vol. 2. vi + 204 pp., 5 plates.
- Pennington, M. S. 1922. Hemipteros nuevos para la Republica Argentina (primera parte). Physis 6:315-319.
- Rolston, L. H. 1973. A new South American genus of Pentatomini (Hemiptera; Pentatomidae). J. N.Y. Ent. Soc. 81:101-110.
- . 1974. Revision of the genus *Euschistus* in Middle America (Hemiptera, Pentatomidae, Pentatomini). Ent. Amer. 48:1-102.
- . 1975. A new species and review of *Sibaria* (Hemiptera: Pentatomidae). J. N.Y. Ent. Soc. 83:218-225.
- Schröder, H. 1964. Die Typen und Typoide des Natur-Museums Senckenberg, 28: Insecta Heteroptera. Senck. Biol. 45:61-80.
- Stål, C. (1858) 1860. Bidrag till Rio Janeiro-traktens, Hemipterfauna. K. Sv. Vet.-Ak. Handl. 2(7):1-84.
- . 1872. Enumeratio Hemipterorum. 2. K. Sv. Vet.-Ak. Handl. 10(4):1-159.
- Van Duzee, E. P. 1901. Notes on some Hemiptera from British Guyana. Trans. Amer. Ent. Soc. 27:343-352.
- Walker, F. 1867. Catalogue of the specimens of Hemiptera-Heteroptera in the collection of the British Museum. Part 2. London. Pp. 241-417.

Department of Entomology, Louisiana State University, Baton Rouge, Louisiana 70803.

Received for publication 28 August 1977.